

We claim:

1. A program update apparatus, which is used for updating an operation program through a memory device or a communication line, comprising:

means for maintaining a second storage area that is separated from a first storage area in which an operation program is stored;

means for storing a second operation program in the second storage area in a separate manner from the first operation program stored in the first storage area;

selective activating means for selectively activating either the first operation program or the second operation program;

failure detecting means which detects a failure in an activation of an operation program selected to be activated or an application program that is operated on the operation program; and

a recovering application which alters a setting required for the operation of the application program,

wherein, in the case when the failure detecting means detects any failure in the activation of the operation program to be selected for activation, another operation program is selected to be activated, and in the case when the failure detecting means detects any failure in activation of the application program, the recovering application is used for

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recovering the setting required for the operation of the application program.

2. The program update apparatus according to claim 1, further comprising:

informing means which gives information to an external device outside the program upgrade apparatus,

wherein, in the case when the updating process of the operation program is not carried out correctly, by the informing means, the information indicating the incorrect updating process is given to an external device outside the program upgrade apparatus.

3. A program update method, which is used for updating an operation program through a memory device or a communication line, comprising the steps of:

storing a second operation program in the second storage area in a separate manner from the first operation program stored in the first storage area;

selectively activating the second operation program at the time of reactivating;

detecting a failure in an activation of an application program that is operated on the operation program;

in the case when any failure is detected in the activation of the application program, activating a recovering application which alters a setting required for the operation of the application program; and

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altering the setting by using the recovering application.

4. The program update method according to claim 3, further comprising the step of:

. in the case when the updating process of the operation program is not carried out correctly, giving the information indicating the incorrect updating process to an external device.

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